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ABSTRACT

Different kinds of tests are given to determine student achievement. Standardized achievement tests are often used, but have many limitations. They may be useful in determining the content students should learn and its relevance for future learning and the curriculum. Criterion referenced tests eliminate a major weakness of standardized tests in that there are accompanying objectives teachers can use in teaching students. When a constructivist approach is taken to assessment, evaluation is based on contextual situations. The portfolio represents a constructivist approach that can really sample student achievement. Computer-based tests have many advantages, especially in the immediacy of feedback to students, but they also have limitations centering on the lack of opportunity for students to raise questions or have input into the curriculum. Many problems remain to be resolved with regard to assessing student attainment, but new ways to assess student achievement are definitely needed. (Contains nine references.) (SLD)

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PURPOSES IN LEARNER ASSESSMENT

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PURPOSES IN LEARNER ASSESSMENT

There are a plethora of ways that pupils may to assessed to notice achievement. Certainly, assessment is a major topic for discussion in the educational arena. There seemingly is much testing to notice pupil progress. With diverse means of attempting to ascertain achievement, it behooves teachers, administrators, parents, and support staff to be able to use test results to implement a quality curriculum based on needs and interests of pupils. The purpose of this paper is to evaluate uses that can be made of different kinds of tests given to determine pupil achievement.

Standardized Achievement Tests

Many school systems and selected states in the United States give standardized tests to pupils. Seemingly, there are numerous weaknesses in giving this type of test to pupils to measure achievement. First of all, validity is lacking in that pupils have not had the opportunities to learn what is contained in the test in terms of subject matter to be assessed in. Thus, there are no accompanying objectives for teachers to use in teaching so that pupils may reveal what has been learned as a result of instruction. Teachers then need to hypothesize and listen to other educators discuss, from having given the test to pupils, as to what might have been contained therein in terms of subject matter content. There are no objectives for other educators to gauge their own teaching as benchmarks (Ediger,1996, 3-25).

A major goal of achievement test writers is to spread pupils out from high to low or from the ninetieth percentile to the first percentile. In pilot studies made, a good test item is gotten right by those high on the total test. A mediocre test item is one that pupils got right and who were low on the total test. Popham (1999) writes that "the better the job that educators do in teaching important knowledge and skills, the less likely it is that there will be items on a standardized achievement test measuring such knowledge and skills." This is due to to taking out items, from pilot studies, to which most pupils responded correctly. Important test items may then be removed from a standardized test due to not discriminating the "right way" in pilot studies. Popham goes on to write about three kinds of test items that appear on standardized tests.The first kind deal with test items that do attempt to measure achievement in the academic discipline being or having been taught in school. This is the way it should be. However, there are also test items on a standardized test that measure native intelligence, as well as those test items that measure previous opportunities to learn which definitely

favors pupils who come from higher socioeconomic levels (Ediger, 1999, Chapter Nine).

Verbal intelligence is emphasized in written test items. Thus reading and writing are largely stressed in test taking. Gardner (1993) emphasizes the importance of eight intelligences that pupils possess and verbal/linguistic inteliigence is one of these intelligences. Not all pupils reveal what has been learned through verbal/linguistic intelligence as being as possessing the major way to indicate learning. Gardner (1993) also lists the following:

1. logical/mathematical whereby a pupil may show his/her strengths in learning through these ways, regardless of subject matter acquired.
2. visual/spatial in which pupils excel in art work to indicate achievement of objectives stressed in teaching.
3. musical whereby a pupil indicates achievement of subject matter through the medium of musical endeavors.
4. bodily/kinesthetic indicating strengths in physical education, dance, and movement experiences to indicate what has been learned.
5. interpersonal intelligence whereby a pupil reveals achievement best within group or collaborative endeavors.
6. intrapersonal intelligence which tends to stress more optimal achievement of pupils when learning on an individual basis.
7. scientific/objective approaches whereby a pupil indicates subject matter acquired through the methods of science in which objectivity is stressed.

Of the eight intelligences listed by Gardner, the same subject matter acquired by a set of pupils may be revealed in achievement through the use of numerous intelligences, not testing alone which stresses use of verbal/linguistic intelligence.

In my own thinking pertaining to standardized achievement test results, what pupils have missed and are weak in may be

1. diagnosed to evaluate if the content should become an objective for learners to achieve.
2. appraised to notice its relevance in future lessons and units of study.
3. emphasized in the curriculum integrated with other relevant learnings.

Not all standardized test items then have and contain what might be vital and important to learn. More attention should also be paid to what measures native intelligence, as well as opportunities to learn outside the school setting. Measuring academic achievement is the sole

goal of standardized achievement tests. Companies that develop and sell these kinds of tests should have a set of relevant and valid accompanying objectives for teachers to use in teaching pupils.

Criterion Referenced Tests

Criterion referenced tests (CRTs) have taken out a major weakness from standardized tests in that there are accompanying objectives available for teachers to use in teaching pupils. However, too frequently, the objectives are voluminous in number and need to be sorted out in terms of what is relevant to teach from those which are not. What is relevant must be the most salient of all these objectives. Test items from the CRT must truly measure what pupils have learned when teachers have implemented the important objectives. A major goal of CRTs is that the assessment procedures are directly aligned with the stated objectives. High validity should then be in evidence. In contrast, when using standardized achievement teats, the teacher guesses what will be contained as test items therein (See Scott, 1999, 15-18).

A major problem of CRTs, adopted on the state level as being mandated, pertains to their lack in having been tried out in pilot studies to take out weak test items, but not to spread pupils out from high to low as is true of standardized tests. Thus, in taking out weak test items from CRTs involves omitting the following multiple choice constructions:

1. those that are not clearly written.
2. those not aligned with an objective in the CRT.
3. those which measure intelligence, rather than achievement.
4. those which measure opportunities to learn, outside of school, rather than what has been achieved in ongoing lessons and units of study in school.
5. those which no one answers correctly and those which all miss on the proposed CRT.

With CRTs, ideally, all pupils should achieve well since the teacher taught lessons directly related to predetermined measurably stated objectives for pupils to achieve. The philosophy of standardized testing is quite opposite of standardized testing. CRTs do not recommend pupils being spread out from high to low, as indicated from testing, as is true of standardized tests (Ediger,1993, ERIC -- ED 236578).

Constructivism in Assessment

Constructivism is a relatively recent trend in evaluation and yet it has always been used in the classroom setting. Here, the evaluation is based on contextual situations such as what pupils are doing in the

classroom to achieve objectives of instruction. The objectives are generally developed by the teacher or through teacher/pupil planning. Here, the assessment may be done by the teacher or cooperatively with learner input. One feature of constructivism has been the development and use of portfolios. Portfolios do have rather heavy pupil involvement in their development. A portfolio has purpose or reasons for their development and inclusion. The portfolio contains products and audio-visual aids of pupil achievement and interactions in the classroom. In other words, portfolios are developed internally within the classroom setting, not the products of test items written by individuals/groups external to where pupils are located and taught. Standardized tests and CRTs are given at infrequent intervals to ascertain pupil achievement. The infrequent intervals may be once a year for all pupils such as in giving standardized tests to pupils, or in grades two, four, eight, and ten for numerous state mandated CRTs.

A portfolio then contains indicators of pupil achievement that might sample each day of classroom instruction. The portfolio is developed within the classroom and not by those external to the classroom setting. Who should be in a better position to know classroom instruction and interaction than those involved, such as the teacher and his/her pupils. Developers of test items, be they standardized or CRTs, cannot know pupils and what they need in terms of learning activities and objectives. What might a pupil with teacher guidance pick to place inside of a portfolio for the former?

1. representative samples of written work, such as book reports, poems, stories, plays, outlines, and summaries.
2. illustrations drawn pertaining to subject matter learned in an ongoing lesson or unit of study.
3. a video-tape of committee work and collaborative endeavors of the involved pupil.
4. journal entries covering reactions to content studied.
5. diary entries and logs kept of interesting/vital features of ongoing lessons.
6. snapshots of completed projects, murals, and dioramas.
7. drawings and diagrams of selected subject matter related directly to an objective of instruction.
8. letters to the editor, awards received, and honors granted for personal progress in learning.
9. cassette tapes of recorded oral presentations in class.
10. an essay pinpointing objectives of the portfolio as well as why products were chosen for the portfolio.

Additional items to be placed inside a portfolio are checklists to indicate achievement, rating scales, and personal autobiographies

written by the involved learner. The portfolio should have a table of contents as well as not be too voluminous, nor to thin in scope. Several evaluators need to appraise the portfolio in term of clearly stated guidelines such as in a quality rubric. Evaluators need to be skilled and knowledgeable in order to increase validity and reliability of portfolio contents. Using portfolios to assess pupil achievement might fail if validity and reliability are lacking ingredients in the appraisal process.

Programed Learning and Assessment

When supervising student teachers and cooperating teachers in the public schools, I became very interested in programed reading, using a basal text, in the Ottumwa, Iowa Public Schools, during the late 1960s and early 1970s. Here, a pupil reads a short paragraph or a few sentences, responds in his/her answer book to a multiple choice item covering content read, and checks the response with that contained in the programed textbook. If correct, the pupil feels rewarded and if incorrect, the correct answer was viewed and both leaners were ready for the next closely sequenced reading and testing item. Read, respond, and check were stressed again and again with no variation.

The sequence followed a very specific order in programmed reading with the pupil

1. reading a small amount of material.
2. responding to a multiple choice item to notice comprehension.
3. receiving immediate feed back to the reader by checking his/her response with the correct answer given by the programmer.
4. being successful most of the time when responding to sequential multiple choice items.
5. receiving knowledge of results quickly with involved extrinsic motivation when being successful in reading.

Tutorial computerized packages use the same format, as do programed texts, with read, respond, and check sequences in learning. The steps are indeed small when the pupil moves forward in responding to multiple choice test items which cover content read. In pilot studies, very large steps between sequential content to be read can be minimized by inserting another step of reading/learning and test item where pupils had made errors in the computerized package. Thus, the gap was too large and the pupil needed to have subject matter injected between one or more steps so that more successful learning is an end result.

A major advantage of using computer packages in the classroom is that the teacher does not have to do the checking of answers with involved paper work. Rather, the computer program keeps track of the number scored correctly by a learner and diagnoses where he/she made

an error within a sequential step of learning. There is immediate knowledge of results for the pupil and the teacher as to how well the former did in responding to a computer program (See Eddy, and others, 1997, 478- 480).

Disadvantages in using computer packages in teaching are the following:

1. they may not fit in to what is being taught in an ongoing unit of study.
2. they offer no opportunities for pupils to raise questions of the programmer.
3. they permit no input from the learner in curriculum development.
4. the routine of learning might become quite monotonous with a read, respond, and check sequence.
5. the sameness in learning activities should be altered with having a variety of experiences for pupils.

Computer programmers do not know the pupils personally or even vaguely pertaining to those using these materials of instruction in the classroom. They develop their materials as outsiders to teaching and learning situations involving pupils (See Ediger, 1996, Chapter Five).

Constructivism and Assessment

Constructivism is a rather recent term used in teaching pertaining to an approach that had been used for a long time in the areas of curriculum, instruction, and assessment. Constructivism emphasizes assessing within the classroom in ongoing learning activities. Thus, continuous evaluation is possible, not a once a year approach as is true of standardized testing or the approximate biyearly testing as is true of many state mandated CRTs.

Constructivism then is contextual in that the pupils and the teacher cooperatively may develop and implement objectives of instruction. The learning opportunities to guide pupils to achieve the stated objectives are also planned cooperatively or by the teacher solely. Assessing is done in terms of what pupils reveal is lacking within an ongoing learning experience. The diagnosed results are then remedied with appropriate learning opportunities

Constructivism also stresses pupils individually, with teacher assistance, developing a portfolio to reveal achievement and progress. The completed portfolio is then available to parents in ascertaining and assessing pupil achievement. Items that may be placed into a portfolio by the learner with teacher guidance are the following:

1. written book reports, outlines, summaries, plays, diary entrees, logs, and journal writing.
2. diagrams, graphs, crossword puzzles, drawings, and art work,

all directly related to units of study in the curriculum.

3. tapes of oral reports, discussions in committee settings, speeches given involving diverse purposes, introductions made, readers' theater, and oral reading of subject matter.

4. snapshots of construction work, murals completed in a committee, bulletin board displays completed, and teaching aids made.

5. video-tapes of group work, involvement at learning centers, and dramatic activities, among other learning opportunities.

The portfolio emphasizes a purposeful collection of products and processes of everyday work of pupils. Each pupil develops his/her portfolio with the help and suggestions of the classroom teacher. By making comparisons of earlier with later written work, for example, the pupil and his/her parents may notice achievement and progress. Parents, too, may be better informed of the child's work within a given flexible unit of time.

Appraisers of portfolios need to have quality rubrics available to evaluate the contents. Validity of portfolio items to achieve vital objectives need to be a part of the assessment process. Reliability or consistency of scoring the portfolios might the a bigger problem. This may be difficult to come by with more than one assessor doing the appraising of each portfolio. However, with carefully designed rubrics, the chances should be better to achieve quality reliability. If the differences are too great in evaluation results of the evaluators of a portfolio, then reliability is lacking and the final rating or scoring might have limited value. Much time, therefore, should be spent on designing a carefully developed set of rubrics to be used in the assessment process (Ediger, 1999, Chapter Seven).

Conclusion

There are numerous problems that need to be ironed out pertaining to assessing pupil achievement in the public schools. Identification of these problems are musts. This should lead in the direction of better means of assessing and reporting of learner progress. There is much discourse on evaluating pupil achievement. Better ways need to be found to assess pupil achievement. Problems involved include validity and reliability in the assessment process, be it in tests written or portfolio approaches to ascertain pupil achievement and progress.

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